IFWO

RAW SEQUENCE LISTING DATE: 09/29/2004
PATENT APPLICATION: **US/10/815,337** TIME: 13:05:45

Input Set : **A:\Sequence listing.ST25.txt**
Output Set: **N:\CRF4\09292004\J815337.raw**

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  3 <110> APPLICANT: Gurtu, V
  5 <120> TITLE OF INVENTION: Renilla GFP MUTANTS WITH INCREASED FLUORESCENT INTENSITY
  7 <130> FILE REFERENCE: 25436/2412
  9 <140> CURRENT APPLICATION NUMBER: US 10/815,337
C--> 10 <141> CURRENT FILING DATE: 2004-04-01
 12 <150> PRIOR APPLICATION NUMBER: 60/460,432
 13 <151> PRIOR FILING DATE: 2003-04-04
 15 <160> NUMBER OF SEQ ID NOS: 80
 17 <170> SOFTWARE: PatentIn version 3.3
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 20 <211> LENGTH: 720
 21 <212> TYPE: DNA
 22 <213> ORGANISM: Renilla reniformis
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 27 aacctggagg gcgtggtgaa caaccacgtg ttcaccatgg agggctgcgg caagggcaac    120
 29 atcctgttcg gcaaccagct ggtgcagatc cgcgtgacca agggcgcccc cctgcccttc    180
 31 gccttcgaca tcctgagccc cgccttccag tacggcaacc gcaccttcac caagtacccc    240
 33 gaggacatca gcgacttctt catccagagc ttccccgccg gcttcgtgta cgagcgcacc    300
 35 ctgcgctacg aggacggcgg cctggtggag atccgcagcg acatcaacct gatcgaggag    360
 37 atgttcgtgt accgcgtgga gtacaagggc cgcaacttcc ccaacgacgg ccccgtgatg    420
 39 aagaagacca tcaccggcct gcagcccagc ttcgaggtgg tgtacatgaa cgacggcgtg    480
 41 ctggtgggcc aggtgatcct ggtgtaccgc ctgaacagcg gcaagttcta cagctgccac    540
 43 atgcgcaccc tgatgaagag caagggcgtg gtgaaggact tccccgagta ccacttcatc    600
 45 cagcaccgcc tggagaagac ctacgtggag gacggcggct tcgtggagca gcacgagacc    660
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 51 <211> LENGTH: 239
 52 <212> TYPE: PRT
 53 <213> ORGANISM: Renilla reniformis
 55 <400> SEQUENCE: 2
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 61 Ser Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr
 62             20                  25                  30
 65 Met Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val
 66         35                  40                  45
 69 Gln Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile
 70     50                  55                  60
 73 Leu Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro
 74 65                  70                  75                  80
 77 Glu Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val
 78                 85                  90                  95
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ENTERED

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Input Set : **A:\Sequence listing.ST25.txt**
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81 Tyr Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg
82             100                 105                 110
85 Ser Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr
86         115                 120                 125
89 Lys Gly Arg Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile
90     130                 135                 140
93 Thr Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val
94 145                 150                 155                 160
97 Leu Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe
98                 165                 170                 175
101 Tyr Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys
102             180                 185                 190
105 Asp Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr
106         195                 200                 205
109 Val Glu Asp Gly Gly Phe Val Glu Gln His Glu Thr Ala Ile Ala Gln
110     210                 215                 220
113 Leu Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val
114 225                 230                 235
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120 <213> ORGANISM: Renilla reniformis
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127 atcctgttag gcaaccagct ggtgcagatc cgcgtgacca agggcgcccc cctgcccttc    180
129 gccttcgaca tcctgagccc cgccttccag tacggcaacc gcaccttcac caagtacccc    240
131 gaggacatca gcgacttctt catccagagc ttccccgccg gcttcgtgta cgagcgcacc    300
133 ctgcgctacg aggacggcgg cctggtggag atccgcagcg acatcaacct gatcgaggag    360
135 atgttcgtgt accgcgtgga gtacaagggc cgcaacttcc ccaacgacgg ccccgtgatg    420
137 aagaagacca tcaccggcct gcagcccagc ttcgaggtgg tgtacatgaa cgacggcgtg    480
139 ctggtgggcc aggtgatcct ggtgtaccgc ctgaacagcg gcaagttcta cagctgccac    540
141 atgcgcaccc tgatgaagag caagggcgtg gtgaaggact tccccgagta ccacttcatc    600
143 cagcaccgcc tggagaagac ctacgtggag gacggcggct tcgtggagca gcacgagacc    660
145 gccatcgccc agctgaccag cctgggcaag cccctgggca gcctgcacga gtgggtgtaa    720
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149 <211> LENGTH: 239
150 <212> TYPE: PRT
151 <213> ORGANISM: Renilla reniformis
153 <400> SEQUENCE: 4
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156 1               5                  10                  15
159 Ser Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr
160             20                  25                  30
163 Met Glu Gly Cys Gly Lys Gly Asn Ile Leu Leu Gly Asn Gln Leu Val
164         35                  40                  45
167 Gln Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile
168     50                  55                  60
171 Leu Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro
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Input Set : **A:\Sequence listing.ST25.txt**
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172 65                  70                  75                  80
175 Glu Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val
176                 85                  90                  95
179 Tyr Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg
180             100                 105                 110
183 Ser Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr
184         115                 120                 125
187 Lys Gly Arg Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile
188     130                 135                 140
191 Thr Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val
192 145                 150                 155                 160
195 Leu Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe
196                 165                 170                 175
199 Tyr Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys
200             180                 185                 190
203 Asp Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr
204         195                 200                 205
207 Val Glu Asp Gly Gly Phe Val Glu Gln His Glu Thr Ala Ile Ala Gln
208     210                 215                 220
211 Leu Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val
212 225                 230                 235
215 <210> SEQ ID NO: 5
216 <211> LENGTH: 720
217 <212> TYPE: DNA
218 <213> ORGANISM: Renilla reniformis
220 <400> SEQUENCE: 5
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225 atcctgttcg gcaaccagct ggtgcagatc cgcgtgacca agggcgcccc cctgcccttc    180
227 gccttcgaca tcctgagccc cgccttccag tacggcaacc gcaccttcac caagtacccc    240
229 gaggacatca gcgacttctt catccagagc ttccccgccg gcttcgtgta cgagcgcacc    300
231 ctgcgctacg aggacggcgg cctggtggag atccgcagcg acatcaacct gatcgagggg    360
233 atgttcgtgt accgcgtgga gtacaagggc cgcaacttcc ccaacgacgg ccccgtgatg    420
235 aagaagacca tcaccggcct gcagcccagc ttcgaggtgg tgtacatgaa cgacggcgtg    480
237 ctggtgggcc aggtgatcct ggtgtaccgc ctgaacagcg gcaagttcta cagctgccac    540
239 atgcgcaccc tgatgaagag caagggcgtg gtgaaggact tccccgagta ccacttcatc    600
241 cagcaccgcc tggagaagac ctacgtggag gacggcggct tcgtagagca gcacgagacc    660
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247 <211> LENGTH: 239
248 <212> TYPE: PRT
249 <213> ORGANISM: Renilla reniformis
251 <400> SEQUENCE: 6
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257 Ser Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr
258             20                  25                  30
261 Met Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val
262         35                  40                  45
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265 Gln Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile
266     50                  55                  60
269 Leu Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro
270 65                  70                  75                  80
273 Glu Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val
274                 85                  90                  95
277 Tyr Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg
278             100                 105                 110
281 Ser Asp Ile Asn Leu Ile Glu Gly Met Phe Val Tyr Arg Val Glu Tyr
282         115                 120                 125
285 Lys Gly Arg Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile
286     130                 135                 140
289 Thr Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val
290 145                 150                 155                 160
293 Leu Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe
294                 165                 170                 175
297 Tyr Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys
298             180                 185                 190
301 Asp Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr
302         195                 200                 205
305 Val Glu Asp Gly Gly Phe Val Glu Gln His Glu Thr Ala Ile Ala Gln
306     210                 215                 220
309 Leu Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val
310 225                 230                 235
313 <210> SEQ ID NO: 7
314 <211> LENGTH: 720
315 <212> TYPE: DNA
316 <213> ORGANISM: Renilla reniformis
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323 atcctgttcg gcaaccagct ggtgcagatc cgcgtgacca agggcgcccc cctgcccttc    180
325 gccttcgaca tcctgagccc cgccttccag tacggcaacc gcaccttcac caagtacccc    240
327 gaggacatca gcgacttctt catccagagc ttccccgccg gcttcgtgta cgagcgcacc    300
329 atgcgctacg aggacggcgg cctggtggag atccgcagcg acatcaacct gatcgaggag    360
331 atgttcgtgt accgcgtgga gtacaagggc cgcaacttcc ccaacgacgg ccccgtgatg    420
333 aagaagacca tcaccggcct gcagcccagc ttcgaggtgg tgtacatgaa cgacggcgtg    480
335 ctggtgggcc aggtgatcct ggtgtaccgc ctgaacagcg gcaagttcta cagctgccac    540
337 atgcgcaccc tgatgaagag caagggcgtg gtgaaggact tccccgagta ccacttcatc    600
339 cagcaccgcc tggagaagac ctacgtggag gacggcggct tcgtggagca gcacgagacc    660
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345 <211> LENGTH: 239
346 <212> TYPE: PRT
347 <213> ORGANISM: Renilla reniformis
349 <400> SEQUENCE: 8
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352 1               5                   10                  15
355 Ser Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr
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PATENT APPLICATION: US/10/815,337 TIME: 13:05:45

Input Set : A:\Sequence listing.ST25.txt
Output Set: N:\CRF4\09292004\J815337.raw

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356              20                  25                  30
359 Met Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val
360         35                  40                  45
363 Gln Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile
364     50                  55                  60
367 Leu Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro
368 65                  70                  75                  80
371 Glu Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val
372                 85                  90                  95
375 Tyr Glu Arg Thr Met Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg
376             100                 105                 110
379 Ser Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr
380         115                 120                 125
383 Lys Gly Arg Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile
384     130                 135                 140
387 Thr Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val
388 145                 150                 155                 160
391 Leu Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe
392                 165                 170                 175
395 Tyr Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys
396             180                 185                 190
399 Asp Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr
400         195                 200                 205
403 Val Glu Asp Gly Gly Phe Val Glu Gln His Glu Thr Ala Ile Ala Gln
404     210                 215                 220
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408 225                 230                 235
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421 atcctgtccg gcaaccagct ggtgcagatc cgcgtgacca agggcgcccc cctgcccttc    180
423 gccttcgaca tcctgagccc cgccttccag tacggcaacc gcaccttcac caagtacccc    240
425 gaggacatca gcgacttctt catccagagc ttccccgccg gcttcgtgta cgagcgcacc    300
427 ctgcgctacg aggacggcgg cctggtggag atccgcagcg acatcaacct gatcgaggag    360
429 atgttcgtgt accgcgtgga gtacaagggc cgcaacttcc ccaacgacgg ccccgtgatg    420
431 aagaagacca tcaccggcct gcagcccagc ttcgaggtgg tgtacatgaa cgacggcgtg    480
433 ctggtgggcc aggtgatcct ggtgtaccgc ctgaacagcg gcaagttcta cagctgccac    540
435 atgcgcaccc tgatgaagag caagggcgtg gtgaaggact tccccgagta ccacttcatc    600
437 cagcaccgcc tggagaagac ctacgtggag gacggcggct tcgtggagca gcacgagacc    660
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443 <211> LENGTH: 239
444 <212> TYPE: PRT
445 <213> ORGANISM: Renilla reniformis
447 <400> SEQUENCE: 10
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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 09/29/2004
PATENT APPLICATION: US/10/815,337 TIME: 13:05:46

Input Set : A:\Sequence listing.ST25.txt
Output Set: N:\CRF4\09292004\J815337.raw

nvalid <213> Response:
se of "Artificial" only as "<213> Organism" response is incomplete,
er 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

eq#:63,64,65,66,67,68,70,71,72,73,74,75,76,77,78,80

VERIFICATION SUMMARY DATE: 09/29/2004
PATENT APPLICATION: **US/10/815,337** TIME: 13:05:46

Input Set : **A:\Sequence listing.ST25.txt**
Output Set: **N:\CRF4\09292004\J815337.raw**

L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date